

## TUBE CHAIN CONVEYORS GO WHERE OTHERS FEAR TO TREAD

The conveying of bulk materials is often challenging. The ability to solve spillage problems requires a broad range of tools to address the issues. Powders can be abrasive, sticky, fluidise readily etc. The trick is to use a conveyor that ensures that all material delivered at the loading points is discharged at the outlet and eliminate fugitive dust. An ideal and very versatile tool for this is the tube chain conveyor from Schrage Rohrketten-system GmbH. It is a solution looking for a problem. Renby is delighted to offer this incredibly flexible system. There are many installations within the British Isles whereby our customers have successfully solved conveying applications that were not possible with any other system.

The tube chain conveyor is able to convey a broad range of products from dry powders right through to wet sludges. It can convey horizontally, vertically or at any angle in-between. Schrage conveyors are also totally dust tight and are perfectly suited to applications where spillage must be eliminated and / or is unacceptable.

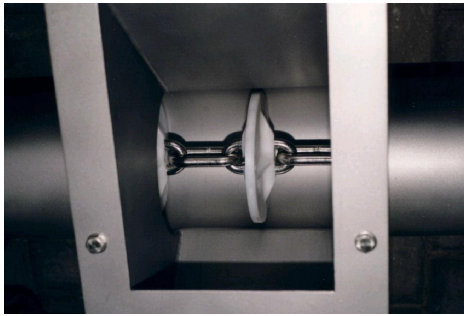
Available in a range of different sizes, most application requirements can be covered by the system. The system is quite at home handling abrasive or sticky materials and as the material is moved in what are effectively moving pockets, product segregation is virtually eliminated. The system is readily available in ATEX versions from rating ATEX 20 to ATEX 22 as well as safe zone operation.

In many cases, by working together closely with our customers, we have been able to provide a solution that had hitherto been insoluble.

We are the only company in Europe that can offer the unique combination of tube chain conveyors and moving floor systems under one roof (see later), Renby is the first choice for the transport, reception, and conveying of your bulk materials.

In the coming pages, we have endeavoured to summarise the broad range of applications in which these conveyors can be used.

## How The Tube Chain Conveyor Works



The conveyors consist of a series of disks attached to a chain. This assembly is drawn through a tube, which completely encloses the conveyed material. The chain runs as an endless loop and is drawn through the tubes by a rotating drive sprocket, fitted at the head end of the conveyor.

Whilst the tube chain conveyor may look like other types of conveyor, for instance, rope and disk based systems, it works in a totally different way. The chain speed in the conveyor is slow, with a maximum speed of 450mm/s. The conveyors also consume a minimum of power; from the smallest conveyor - 0.25 kW (about the same as a modern desktop computer) to convey 0.45 cubic metres per hour ranging to 11kW to convey a massive 230 cubic metres per hour (m<sup>3</sup>/h). This means that your energy consumption is kept to a minimum.

Any number of inlets or outlets can be provided to match the requirement of your application. The conveyors will also convey around bends at any angle and in any plane.

### Maintenance Requirements

Once the units have been commissioned and run for a few days, maintenance requirements are very low. All that is required is occasional checks of the chain tension - which takes 15 minutes to half an hour - and occasional greasing of the bearings.



When operated within our guidelines tube chain conveyors are the effective work horse of choice for your process.

### Available Capacities

Tube chain conveyors are available in six sizes:

Type 115:	0 -> 7 cu. m/h
Type 160:	0 -> 28 cu. m/h
Type 200:	0 -> 44 cu. m/h
Type 270:	0 -> 60 cu. m/h
Type 400:	0 -> 112 cu. m/h
Type 800:	0 -> 230 cu. m/h

Note, in every case, they can run, start, stop either empty, full or any combination in-between. This allows full versatility with the control system so that you can dictate what the conveyor does rather than be dictated to by the conveyor.

Within the size ranges, typical throughput is set by the motor and gearbox combination. If your application changes and an increased throughput is required, a change of drive unit will be all that is needed. Likewise, because the conveyors bolt together, increasing the length is simply a matter of adding tube and chain.

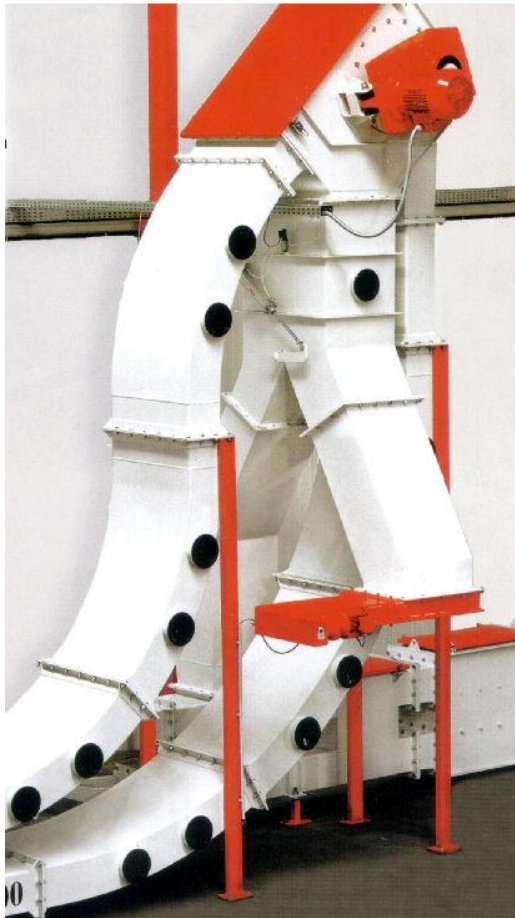
A single conveyor can run horizontally for up to 50metres or it will elevate product vertically 30metres.

### Product Evaluation



When conveying bulk materials, it is always best to consider a trial of the product. The system above is a part of the extensive test facility at Schrage Rohrketten-system HQ in Friedeburg, North Germany. Customers are always welcome to visit the company and the large test hall can prove most applications. We also have a smaller demonstration unit in the UK which demonstrates the principles of the system.

## Benefits



- ÿ Low Wear Rates, so Low Running Costs
- ÿ Modular Construction - the conveyors can grow with your application
- ÿ Low energy consumption gives low running costs
- ÿ Minimal product retention in the conveyor minimises cross contamination
- ÿ Self cleaning system
- ÿ Totally dust tight, no spillage means a clean working environment
- ÿ Gentle product handling - keeps the value in your manufactured product



- ÿ Fits into tight spaces - often, the tube chain conveyor has been the only system that meets the customer's specific requirement.
- ÿ ATEX versions readily available can contain the pressure wave of an explosion
- ÿ Will start up empty or fully loaded giving flexibility in the control system
- ÿ Many patents filed - ensures that you are dealing with a world leader
- ÿ Over 1700 installations world wide

To find out more about how the innovative Schrage Rohrketten GmbH tube chain conveyor can start to work for you: Call Renby Ltd on 01829 740913.

